

In the Claims

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Please cancel claims 12, 13, 16 and 17 without prejudice.

Please amend claims 1, 14, and 18 as follows.

- B10
SUB
C1
1. (AMENDED) A method of generating a cell culture comprising dopaminergic neuron cells, said method comprising:
- a. proliferating precursor cells, said step of proliferating comprising:
 - i. incubating a suspension of said precursor cells in a proliferating medium which includes basic fibroblast growth factor (bFGF) to form proliferated precursor cells; and
 - b. differentiating said precursor cells, said step of differentiating comprising:
 - i. incubating said precursor cells in an incubation vessel which contains differentiation medium in a manner effective to form a reaggregation of differentiated dopaminergic neuron cells that is not adhered to any surface of the incubation vessel, wherein the differentiation medium includes ascorbic acid;
- wherein said precursor cells comprise CNS stem cells.

- B11
14. (AMENDED) A method of introducing a gene product into a brain of a patient, comprising:
- A. transforming neuronal precursor cells with a gene encoding said gene product;
 - B. culturing said transformed neuronal precursor cells according to claim 1 to form differentiated transformed neuronal cells; and
 - C. administering said differentiated transformed neuronal cells to a patient in need thereof.

- B12
18. (AMENDED) A cell culture comprising about 80% to about 95% of a total cell population in the culture comprise differentiated neuronal cells and less than 5% of the total cell population comprises glial cells wherein the differentiated neuronal cells comprise dopaminergic cells.

Please add and consider new claims 20-24 as follows.

- sub
ca
20. (NEW) A method of treating a patient for a neurological disorder, said method comprising administering cells produced according to the method of claim 1 to the patient.
21. (NEW) The method of claim 20, wherein said neurological disorder is Parkinson's disease.
22. (NEW) The method of claim 20, wherein the method of treating a patient further comprises:
- i. suspending said cells in a physiologically compatible carrier;
 - ii. introducing a therapeutically effective amount of said cells into the brain of the patient.
23. (NEW) The method of claim 22 wherein introducing a therapeutically effective amount further comprises administering $1-4 \times 10^6$ dopaminergic neurons, wherein administering further comprises loading said cells into a syringe and injecting them within the parenchyma of the patient's brain.
24. (NEW) An assay for a substance, comprising:
- A. culturing differentiated neuronal cells, said step of culturing comprising:
 - i. proliferating neuronal precursor cells, said step of proliferating comprising:
 - a. incubating said neuronal precursor cells in proliferating medium which includes basic fibroblast growth factor (bFGF); and
 - ii. differentiating said neuronal precursor cells, said step of differentiating comprising:
- B13
- sub
C3

B13
CONT

aa. incubating said precursor cells in an incubation vessel which contains differentiation medium in a manner effective to form a reaggregation of differentiated cells that is not adhered to any surface of the incubation vessel, wherein said differentiating medium includes ascorbic acid,

- B. exposing said differentiated neuronal cells to the substance; and
C. observing the effect of the substance on said differentiated neuronal cells.
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